

Message

From: Zarker, Ken (ECY) [kzar461@ECY.WA.GOV]
Sent: 3/16/2018 12:59:55 AM
To: Mullin, Michelle [Mullin.Michelle@epa.gov]
CC: ABOR461@ECY.WA.GOV; VanBergen, Saskia (ECY) [sava461@ECY.WA.GOV]; Duncan, Bruce [Duncan.Bruce@epa.gov]; Baldwin, Karin K. (ECY) [KBAL461@ECY.WA.GOV]; Knapp, Anne (ECY) [akna461@ECY.WA.GOV]; McArthur, Lisa [McArthur.Lisa@epa.gov]; sds461_ecy.wa.gov [sds461@ecy.wa.gov]; Trumbull, Kari (ECY) [katr461@ECY.WA.GOV]
Subject: RE: EPA Research Proposal- requesting your support
Attachments: 2018 Ecology Inadvertent PCBs Commitment letter.pdf

Hi Michelle – We are pleased to support the R10 ORD project proposal.

Attached is the letter of support related to the ORD science project for inadvertent PCBs. Thanks for reaching out to us on this.

Let me know if this is ok or if it needs any tweaks. I've included a number of my Ecology colleagues as well that have an interest in this work if you are selected.

Best wishes,

Ken

From: Mullin, Michelle [mailto:Mullin.Michelle@epa.gov]
Sent: Monday, March 12, 2018 6:36 PM
To: VanBergen, Saskia (ECY) <sava461@ECY.WA.GOV>
Subject: EPA Research Proposal- requesting your support

Hello Saskia-

I am submitting a proposal to EPA Office of Research and Development in order to hopefully win some funding to conduct research on inadvertent PCBs. These grants are highly competitive, but I think we have a good chance because we are building on existing, recently published work, addressing a regional and nationally identified priority, and building on the work of our local partners.

One thing that can help my proposal go through is if some of those external partners express their support for the project.

So, to that end- would you be able to provide a brief e-mail lending your support to this effort by Thursday? Something that simply states that your program believes this is an important science need and this research would fill a valuable data gap would suffice. If you know of other internal or external partners that would also be happy to support this I would also appreciate you forwarding this request to them as well, and CC-ing me. I would appreciate having your email of support by Thursday.

Here is a short summary, followed by the proposal description:

The proposal would largely mirror the previous work done by ORD on legacy products (fluorescent light ballasts and caulk) in schools where they conducted emission testing, migration into dust, and some fate and transport and exposure modelling. But this time, we will be evaluating current children's products used in schools. Xiaoyu Liu, one of the principle investigators of the previous research on legacy products in schools, would be the primary investigator in this inadvertent research. She is very excited to do it and has full management support. She just needs the money!

Below is the project description:

Polychlorinated biphenyls (PCBs) are persistent, bioaccumulative, and toxic (PBT) compounds. Although commercial PCB production was banned in 1979 under the Toxics Substance Control Act (TSCA), inadvertent-generation of PCBs continues. The Spokane River Regional Toxics Task Force (SRRTTF) wrote to EPA's Office of Chemical Safety and Pollution Prevention (OCSP) and Office of Enforcement and Compliance Assistance (OECA) in 2013 asking EPA to take action on inadvertent PCBs, due to the presence of inadvertent PCBs in some effluent dischargers to the river, which is impaired for PCBs. Since that time, Region 10 has prioritized inadvertent PCBs, and raised the issue on a national level, resulting in the formation of a national workgroup within the PCB program, and the identification of inadvertent PCBs as a priority within the national PCB program.

PCBs are inadvertently-generated during a variety of chemical production processes and contaminate products as well as waste streams. Notably, there is a growing body of evidence indicating PCB contamination of pigments. While several pigment colors are associated with inadvertent PCB contamination, diarylide yellow pigment production results in the creation of PCB-11, a PCB congener which is a minimal component of the legacy Aroclor mixtures and not a degradation product of legacy sources. During the production of diarylide yellow pigments, PCB-11 actually becomes a component of the yellow pigment molecule, it is integrated into the chemical make-up of the product rather than going into the waste-stream. In 2014 EPA's Office of Pollution Prevention and Toxics (OPPT) within OCSP nominated PCB-11 for toxicity evaluation by the National Toxicology Program (NTP) based on the ubiquity of PCB-11 in the environment and lack of in vivo toxicity studies. Presently the health effects of PCB-11 are unknown, though it is believed to be a neurotoxin with bioaccumulation potential. There is evidence that PCB-11 is found in ambient air, indoor air, surface water, effluents, sediments and human blood. Recent work by Washington State's Department of Ecology indicates PCBs may be present in pigmented children's products at concentrations up to parts per million. Product testing for inadvertent PCBs in consumer products has focused on products either likely to be purchased by state and local governments, or products likely to contribute to stormwater run-off, with only a handful of children's products evaluated. Existing research tends to focus on either end of the spectrum- evaluating PCB concentrations in consumer products, or evaluating inadvertent PCBs in the environment and human blood. An understanding of the fate and transport and exposure pathways is the missing link between the two primary bodies of research on the topic. This leaves discussions regarding migration, exposure, and human health risks subject to assumptions and conjecture. This research proposal aims to better understand the concentrations of inadvertently-generated PCBs in yellow pigmented children's products currently available in stores, and in use in classrooms and daycares. Product testing results will be used to identify products with the highest concentration of inadvertent PCBs for emission, and migration to dust testing and exposure assessment modelling. This research will generate the first data set available to evaluate migration pathways into the environment and potential routes of human exposure to evaluate human health risk assessment. This will be an invaluable toolset for utilizing the PCB-11 toxicity data generated by the NTP, once it is released. Finally, this information will inform discussions about potential migration from other types of products into the environment, and help the regional efforts of the SRRTTF and our state and local partners who are trying to find up-stream solutions to inadvertent PCB contamination - whether the solution lies in preferred purchasing programs, green chemistry, effluent controls, regulatory changes, etc. - understanding the fate, transport and exposure pathways is a critical step in designing the ultimate solution.

Thank you,

Michelle Mullin | PCB Coordinator
U.S. Environmental Protection Agency | Region 10
Office of Air and Waste
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